CLAIMS

What is claimed is:

1. A device for enabling immediate recording of a new message on a partially recorded recording medium without a delay caused by searching for blank memory available for recording on the recording medium, said device comprising:

a solid state digital hand held recording device having a multifunctional switch assembly and a record switch assembly, a digital recording medium including a region forming a continuity of pre-recorded messages, a printed circuit board including a microcontroller electrically coupled to the switch assemblies and operable to control the processing of sound into electrical signals, and store said electrical signals on the recording medium;

recording means coupled to the circuit board and activated by the record switch assembly and including means for (i) searching for an end of a last recorded message, (ii) identifying a point after the end of the last recorded message where the new message may begin, and (iii) beginning recording of the new message at the identified point;

sequencing playback means for playing the new message from the identified point defining the beginning of said new message with no manual involvement of the user other than activating the multifunctional switch means.

2. A device as defined in claim 1, wherein the multifunctional

switch assembly includes a single, manually operable rocker-pad mounted upon the hand held recording device, said rocker-pad including means for activating playback of a pre-recorded message.

3. A device as defined in claim 1, wherein the digital recording medium includes a flash memory unit that is electrically coupled to said device whereby voice messages may be recorded thereon.

4. A device as defined in claim 1, wherein the microcontroller includes a read-only memory for storage of microcontroller instructions for executing the function of message recording.

5. A method for recording a new message on a hand held recording device without disturbing the physical continuity of existing messages and without manually searching for a blank segment of memory on the recording medium, said method comprising the steps of:

a) placing the recording device in an idle mode where all recorder functions are inactive; and

b) activating a record switch causing the recording device to:

i) search for an end of a last recorded message on the recording medium,

ii) identify a segment of memory past the end of a

last recorded message as a beginning point where the new message may be recorded, and

iii) begin recording a new message at the beginning point.

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6. A method for verifying the integrity of memory on a removable flash memory recording medium chip for use within a hand held recording device, such that the flash memory is suitable for recording voice messages, said method comprising the steps of:

a) providing a removable flash memory recording chip and a hand held recording device with a plug assembly for electrically coupling the flash memory and the recording device; and

b) activating a memory integrity test by manually inserting the flash memory chip into the plug assembly of said recording device to electrically couple the flash memory to the recording device.

7. A method as defined in claim 6, wherein the memory integrity test of step b) further comprises the steps of:

a) testing memory segments of the flash memory to determine whether said segments can record and play a voice message, or are defective; and

b) marking defective memory segments so that the recording device will not record to said segments.

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8. A method as defined in claim 6, further providing a method for verifying the integrity of memory on a removable flash memory recording medium chip, said method comprising the steps of:

a) providing a removable flash memory recording chip and a hand held recording device with a plug assembly for electrically coupling the flash memory and the recording device; and

b) activating a memory integrity test of said flash memory by manually inserting batteries into the recording device that is electrically coupled to the flash memory.

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9. A method for indexing a message as it is recorded in a hand held recording device, enabling a user to quickly return to an indexed segment of memory within the message, said method comprising the steps of:

a) beginning a recording by activating a record switch on the hand held recording device;

b) activating the record switch while recording to identify an index point of the recording to be indexed for future reference; and

c) providing means within the hand held recorder for identifying each index point as a starting point of a new recording segment in a larger contiguous memory segment.

10. A device for enabling the testing of memory integrity in a removable flash memory recording medium chip and the marking of defective memory such that voice messages are only recorded to

flash memory capable of storing electrical signals, said device comprising:

a solid state digital hand held recording device having a multifunctional switch assembly and a record switch assembly, the digital recording medium including a region forming a continuity of pre-recorded messages, a printed circuit board including a microcontroller electrically coupled to the switch assemblies and operable to control the processing of sound into electrical signals, store said electrical signals on the recording medium, and play said sounds stored the recording medium; and

memory integrity verification means for ascertaining whether the flash memory can record voice messages to said memory with no manual involvement of the user other than inserting the removable flash memory into a plug assembly in said recording device.

10 ~~10~~. A device as defined in claim 8 ~~9~~, wherein the microcontroller includes a read-only memory for storage of microcontroller instructions for executing the function of memory integrity verification.

12 ~~11~~. A device for enabling indexing of a new message whereby a user may rapidly locate indexed segments of memory within the new message, said device comprising:

a solid state digital hand held recording device having a multifunctional switch assembly and a record switch assembly, a digital recording medium including a region forming a continuity

of pre-recorded message, and a printed circuit board including a microcontroller electrically coupled to the switch assemblies and operable to control the processing of sound into electrical signals, store said electrical signals on the recording medium, and play said sounds stored on the recording medium;

message indexing means for indexing a message when the user activates the record switch while recording, thereby making an index point within the message on the recording medium; and

indexing switching means for moving between the index points to enable the user to rapidly recall indexed messages.

12. A device as defined in claim 11, wherein the microcontroller includes a read-only memory for storage of microcontroller instructions for executing the function of indexing memory segments to facilitate rapid recall of indexed messages.